L9: Entry 6 of 28 File: JPAB Jul 31, 1998

PUB-NO: JP410199533A
DOCUMENT-IDENTIFIER: JP 10199533 A
TITLE: NONAQUEOUS SECONDARY BATTERY AND MANUFACTURE THEREOF

PUBN-DATE: July 31, 1998

INVENTOR-INFORMATION:

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APPL-NO: JP09327909
APPL-DATE: November 28, 1997

INT-CL (IPC): H01 M 4/58; H01 M 4/02; H01 M 10/40

ABSTRACT:

PROBLEM TO BE SOLVED: To provide an electrode enabling increase in the capacity and has excellent repetitive charging/discharging characteristics by using, as an electrode material, such an object as not including high crystallinity carbon having a highly oriented graphite structure but having a slightly disturbed layer structure in its laminate structure, or using carbon having a selective orientation.

SOLUTION: The disturbed layer structure or selective orientability is such one as having interlayer interval of the carbon planes found by X-ray diffraction method is in a range from 3.37 to 3.55Å, and not an object like graphite showing a sharp peak, but showing considerably broad diffraction peak. Furthermore, the peak intensity ratio of 1360cm-1 to the peak intensity 1580cm-1 of laser Raman spectrum is assigned to a range from 0.4 to 1.0. In this way, carbon body having wider plane interval, smaller crystallites and mutual orientability to some extent exhibits excellent characteristics as an electrode material. Such a body can be formed by a vapor phase deposition method by means of thermal decomposition on a substrate using a hydrocarbon or a hydrocarbon compound as a starting raw material.

WEST Search History

DATE: Wednesday, July 16, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=JPAB; THES=ASSIGNEE; PLUR=YES; OP=OR			
L11	(molten adj1 electrolyte) with carbon	2	L11
L10	l8 and electrolyte	8	L10
L9	L8	28	L9
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR			
L8	l5 and (electrode with carbon)	51	L8
L7	l5 and (electrode same carbon)	64	L7
L6	L5 and turbostratic	0	L6
L5	L4 and electrode	871	L5
L4	mori-m$.in.	7985	L4
L3	mori-m$.in.L2	114321	L3
L2	motoo-m$.in.	0	L2
L1	motoo-m$.did.	0	L1

END OF SEARCH HISTORY

L Number	Hits	Search Text	DB	Time stamp
1	1	("5019464").PN.	USPAT	2003/07/16 13:32
2	0	(429/16 and (molten adj1 electrolyte) and (carbonaceous or carbon)).CCLS.	USPAT	2003/07/16 13:33
3	33	429/16 and (molten adj electrolyte) and (carbonaceous or carbon)	USPAT	2003/07/16 13:33

L Number	Hits	Search Text	DB	Time stamp
1	25204	429/$.ccls.	USPAT	2003/07/16 09:13
2	289	429/$.ccls. and anode adj1 chamber	USPAT	2003/07/16 09:13
3	230	(429/$.ccls. and anode adj1 chamber) and cathode adj1 chamber	USPAT	2003/07/16 09:14
4	121	((429/$.ccls. and anode adj1 chamber) and cathode adj1 chamber) and separator	USPAT	2003/07/16 09:14
5	3	(((429/$.ccls. and anode adj1 chamber) and cathode adj1 chamber) and separator) and (molten adj1 electrolyte)	USPAT	2003/07/16 10:24
6	748	429/101-103.ccls.	USPAT	2003/07/16 10:24
7	51	429/101-103.ccls. and (carbon or carbonaceous) and (molten adj electrolyte)	USPAT	2003/07/16 12:44
8	15	(429/101-103.ccls. and (carbon or carbonaceous) and (molten adj electrolyte)) and oxygen	USPAT	2003/07/16 11:16
9	4	(429/101-103.ccls. and (carbon or carbonaceous) and (molten adj electrolyte)) and (fuel adj1 cell)	USPAT	2003/07/16 11:31
10	4	(("4041210") or ("4317865") or ("4581302") or ("4591538")).PN.	USPAT	2003/07/16 12:34

L Number	Hits	Search Text	DB	Time stamp
1	8194	carbon adj1 particles	USPAT	2003/07/16 07:26
2	1013	ash adj1 free	USPAT	2003/07/16 07:27
3	39	(carbon adj1 particles) and (ash adj1 free)	USPAT	2003/07/16 07:25
4	12460	carbon adj1 particles	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/07/16 07:26
10	1512	ash adj1 free	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/07/16 07:27
16	42	(carbon adj1 particles) and (ash adj1 free)	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/07/16 07:31
22	182	turbostratic	USPAT	2003/07/16 07:31
23	15	(carbon adj1 particles) and turbostratic	USPAT	2003/07/16 07:50
24	25204	429/$.ccls.	USPAT	2003/07/16 07:51
25	223	429/$.ccls. and (turbostratic or amorphous or mesoporous) adj1 carbon	USPAT	2003/07/16 07:51
26	0	429/$.ccls. and (turbostratic adj1 carbon adj1 particles)	USPAT	2003/07/16 07:52
27	3	429/$.ccls. and (turbostratic adj1 carbon)	USPAT	2003/07/16 07:54
28	0	429/$.ccls. and (mesoporous adj1 carbon)	USPAT	2003/07/16 07:54
29	222	429/$.ccls. and (amorphous adj1 carbon)	USPAT	2003/07/16 07:56
30	1	(429/$.ccls. and (amorphous adj1 carbon)) and (molten adj1 electrolyte)	USPAT	2003/07/16 07:57
31	359	429/16	USPAT	2003/07/16 07:57
32	1	429/16 and turbostratic	USPAT	2003/07/16 08:02
33	0	429/16 and mesoporous	USPAT	2003/07/16 08:02

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429/101-103 and carbon